

CLAIMS

1. A multiple power source semiconductor integrated circuit including:

plural function blocks that are supplied with power from different power supply circuits, respectively;

a microcomputer for controlling the supply of power to the plural function blocks, said microcomputer being one of said plural function blocks; and

a power supply control circuit for controlling the supply of power by the power supply circuits under the control of the microcomputer.

2. The multiple power source semiconductor integrated circuit as defined in Claim 1 wherein

the power supply control circuit halts the supply of power to the microcomputer by the power supply circuit when receiving predetermined data from the microcomputer, and restarts the supply of power to the microcomputer by the power supply circuit when receiving an interrupt signal from outside.

3. The multiple power source semiconductor integrated circuit as defined in Claim 1 or 2 wherein

the power supply control circuit includes a register for storing the interrupt signal, and

the microcomputer detects contents of the interrupt signal that is stored in the register, after restart of the

supply of power.

4. The multiple power source semiconductor integrated circuit as defined in any of Claims 1 to 3 wherein

the power supply control circuit outputs a power cutoff signal to the power supply circuits when the supply of power by the plural power supply circuits is to be halted, and

the function blocks and the power supply control circuit each include an inter-block signal fixing circuit for fixing an input logic from a circuit to which supply of power is halted, at "L" or "H" level in accordance with the power cutoff signal.

5. The multiple power source semiconductor integrated circuit as defined in any of Claims 1 to 4 wherein

the power supply control circuit outputs a power cutoff signal to the power supply circuits when the supply of power by the plural power supply circuits is to be stopped, and

the function blocks and the power supply control circuit each include an inter-block signal fixing circuit for fixing an output logic to a circuit that is in a state where the supply of power is halted, at "L" level in accordance with the power cutoff signal.

6. The multiple power source semiconductor integrated circuit as defined in any of Claims 1 to 5 including:

a storage means which is always supplied with power and retains system information while the supply of power to the respective function blocks is halted.

7. The multiple power source semiconductor integrated circuit as defined in any of Claims 1 to 6 including:

an input/output terminal circuit for giving and receiving a signal to/from outside, and

the power supply control circuit and the input/output terminal operate on power that is supplied from a common power supply circuit.

8. The multiple power source semiconductor integrated circuit as defined in any of Claims 1 to 6 wherein

the power supply control circuit operates on power that is supplied to the plural power supply circuits, and outputs an all power cutoff signal for stopping the supply of power by all of the plural power supply circuits.